

Task Order 10-10 NT Infrastructure

1.0 TASK TITLE: NT infrastructure Support (WBS 1.1.1)

2.0 TASK DESCRIPTION:

Coordinate and conduct activities related to S&MA NT infrastructure functions and responsibilities. Provide support to activities for authorized organizational functions that benefit all programs and projects and support the functions and responsibilities of the NT Division. Infrastructure functions include assessment of new and emerging technologies, Procurement Quality Assurance (PQA), performance of audits, EEE parts assurance, NASA Advisories and Alerts distribution and tracking, special processes engineering, and flight readiness assessments and supporting activities.

2.1 STATEMENT OF WORK EXPERIENCE Section 6.0 - JSC Project Support,
Section 8.2 - Assurance Methodologies and Technologies

2.2 REQUIREMENTS

2.2.1 Procurement Quality Assurance (PQA) (WBS 1.1.1.1)

Assist NASA in the performance of PQA to verify JSC quality provisions are identified and implemented for each procurement and are consistent with the Federal Acquisition Regulation (FAR) through assisting NASA with the following activities:

- a. Develop quality requirements and provisions recommendations for contracts.
- b. Review and make recommendations for approval on proposed requirements.
- c. Develop Government Source Inspection (GSI) delegation documents.
- d. Analyze Government, Agency, and JSC contractor plans and procedures.
- e. Assess milestone review data packages and generate Review Item Dispositions (RID's).
- f. Perform surveys and audits and generate reports (or inputs for reports) Assure inclusion of supplier audits/reports into the Supplier Assessment System.
- g. Perform problem assessments and recommend resolutions.
- h. Provide a liaison between suppliers and Government agencies, and provide technical recommendations.
- i. Track documentation produced and reviewed.
- j. Maintain Contract Administration Reimbursement Hours Reporting and Projections, and generate reports.
- k. Consolidate and analyze S&MA surveillance reports.
- l. Review purchase orders to verify proper inclusion of quality requirements and supplier qualifications. Utilize DCMA Quality Leading Indicator Reports to perform risk assessments for product quality requirements flowdown with the DCMA letters of delegation.
- m. Review purchase orders to determine if Government Source Inspection (GSI) is required. Develop GMIP plans in accordance with NPR 8735.2 and coordinate with DCMA.
- n. Review purchase orders to determine appropriate quality instructions.
- o. Assure consistency of contractor and subcontractor activities with Federal Acquisition Regulation (FAR) requirements and requirements of NPR 8735.2.
- p. Prepare DRAFT DCMA letters of delegation in accordance with NPR 8735.2.
- q. Review Purchase Cards to verify inclusion of Quality requirement.
- s. Manage and support the Procurement Quality assurance Database.

2.2.2 S&MA Audits (WBS 1.1.1.6)

Assist in the management of NASA-sponsored audits.

- a. Manage a joint audit program for combining contractor-NASA audits at common subcontractors.
- b. Maintain and publish a Master Audit Schedule of audit activity.

2.2.3 EEE Parts Assurance (WBS 1.1.1.2)

Provide EEE Parts Assurance.

- a. Recommend plans for EEE parts control policy and requirements, and work across Directorate, NASA Centers, Programs, and Projects to assure proper implementation.
- b. Identify and track EEE parts issues by generating plans and implementing those plans to resolve issues.
- c. Provide representative to NASA Parts Steering Committees and participate with all NASA Centers in setting electronic parts policy guidelines by developing the NASA Standard Parts List, reviewing and providing comments on (i) military specifications and (ii) NASA policy for EEE parts.

2.2.4 NASA Advisories and ALERT'S (WBS 1.1.1.3)

Support the JSC implementation of the NASA Advisories and Government-Industry Data Exchange Program (GIDEP)/Acute Launch Emergency Reliability Tip (ALERT) System.

- a. Establish and maintain the ALERT distribution list.
- b. Review ALERT's for applicability to JSC contracts, distribute, track, and review responses for adequacy.

2.2.5 Special Processes Engineering (WBS 1.1.1.4)

Provide support to the following tasks in the areas of Nondestructive Evaluation (NDE), electrical and electronics manufacturing, composite materials manufacturing, welding and brazing, precision cleaning and contamination control, and statistical processes:

- a. Prepare NDE plans and instructions, develop NDE techniques, and provide technical expertise to NDE inspection personnel performing NDE tasks.
- b. Perform NDE inspections.
- c. Review technical documents and provide recommendations to resolve potential process control issues (e.g., engineering changes, waivers/deviations, failure investigation reports, technical data submittals, engineering drawings, etc.)
- d. Provide technical expertise to metallic materials, nonmetallics such as RCC, TPS, adhesives, films coatings, and soft goods like Teflon, metallic issues such as fracture control and corrosion.
- e. Perform fracture control testing and analysis.
- f. Perform QA inspections utilizing the computer measurement machine.
- g. Develop and evaluate inspection requirements, special processes, and workmanship standards for the design and manufacture of high reliability electrical/electronics packages and systems for space flight applications.
- h. Develop and evaluate inspection requirements, evaluate test plans and results, and analyze failures in the design and manufacture of advanced composite lightweight materials.
- i. Evaluate industrial workmanship standards, specialized processes, and emerging technologies proposed for adoption by the NASA community for high reliability electrical/electronics packages and systems for space flight applications.
- j. Review welding and brazing work authorization documents and associated
- k. Engineering drawings to assure weldability as well as correctness of drawing notes, welding symbols, and NDT inspection requirements.
- l. Participate as special processes subject matter experts during surveys, vendor qualification evaluations, government source inspections, surveillance, and audits of JSC and contractor manufacturing facilities, including preparing checklists, documenting findings and observations, and providing recommended resolutions for identified problem conditions.
- m. Prepare special processes specifications and detailed process instructions.

- n. Process Quality Purchase Order Addendum for Fluids Procurement (JSC Form 131 3) forms for bottled compressed gas and specialty gas orders.
- o. Develop and evaluate inspection requirements, special processes (including NDE), and workmanship standards for design and manufacture of micro-electro-mechanical systems (MEMS).

2.2.6 Flight Equipment Data System (FEDS) Customer Requirements (WBS 1.1.1.7)

Define and document customer/user requirements needed to support development of a consolidated data architecture and associated processes to facilitate S&MA Certification of Flight Readiness (CoFR) activities. This effort will address the need to consolidate certain existing databases, systems and processes and will allow for future expansion to support additional applications and users.

2.3 DELIVERABLES

GSI delegation documents for NASA approval
Survey and Audit reports
Reimbursement Hours Reporting and Projection reports
S&MA consolidated surveillance report analyses
EEE Part Issue Resolution Plans
Up-to-date ALERT Distribution List
Special Processes Specifications and detailed process instructions
Inspection requirements
Special processes and workmanship standards
FEDS data architecture

3.0 PERIOD OF PERFORMANCE: October 1, 2009 - April 30, 2010

4.0 ESTIMATED COSTS:

Contractor may provide travel, training, materials, and other non-labor resources as necessary to support task order requirements. Training may include selected professional discipline-based or spaceflight-based conferences with approval of the TMR.